

**ABSTRACT OF THE DISCLOSURE**

Disclosed herein is a dye composition for keratin fibers, for example, human keratin fibers such as the hair, comprising, in a medium suitable for dyeing, at least one compound chosen from ortho- and  $\alpha$ -dialdehyde compounds as defined herein and at least one sulphur compound as defined herein. Also disclosed is the use of this composition for dyeing and/or optically lightening keratin fibers, and also to the dyeing process using this composition.